

Letters to the Editor

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- Include no more than 500 words of text, three authors, and five references
- Type with double-spacing
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- Submit the letter electronically via jtcvs.editorialmanager.com.

Letters commenting on an article published in the JTCVS will be considered if they are received within 6 weeks of the time the article was published. Authors of the article being commented on will be given an opportunity to offer a timely response (2 weeks) to the letter. Authors of letters will be notified that the letter has been received. Unpublished letters cannot be returned.

Limitations on the role of vacuum-assisted closure in cardiac surgery

To the Editor:

We disagree with the conclusion of the article of Luckraz and colleagues¹ that vacuum-assisted closure (VAC) “can be used alone as acceptable treatment modality for sternal wound infection.” In their series of 27 patients with postoperative mediastinitis, the intended treatment was VAC initially, but only 14 patients actually had VAC only (group A), whereas the other 13 patients had VAC followed by myocutaneous flap. Of the latter group, 8 patients underwent flap closure because “the wound was clean and granulating but too large,” and 5 more underwent direct closure “because this facilitated discharge from hospital.”¹ This represents a gross 50% failure of the original intended treatment and invalidates the group’s conclusions.

Moreover, of the 14 patients in group A who had VAC only, only 8 had débridement of the sternum, whereas 6 did not. It is not said how many patients who died in groups A and B did not have débridement. In group A, 4 patients died (28.6%), and only 64% survived with healed scar. This in our opinion, does not represent a successful result of the VAC-only therapeutic modality.

Furthermore, 2 patients in group A had multiple organ failure. It was not said whether these 2 patients had persistent mediastinitis. Did they have débridement of the sternum?

We also believe that the incidence of mediastinitis among the patients was miscalculated by the authors, because 27 of 491 patients would be 5%, not 0.05% as stated, and in our opinion represents a rate higher than expected from reports in the literature. The incidence of mediastinitis before VAC was also miscalculated, because 13 of 310 is 4%, not 0.04% as stated.

On the basis of these data, we conclude that VAC alone was successful in a few selected cases and cannot be recommended as solitary treatment. We believe that débridement of the sternum and mediastinum

is an obligatory procedure for every patient who has a deep sternal wound. Often there is accumulation of infected fibrin that needs to be completely removed, and a few patients have fragments of sternum that are devascularized and need to be excised to promote granulation and healing. We favor omental flaps rather than myocutaneous flaps after the débridement, because they are easy, quick, and successful in taking care of the deep mediastinal infection in 100% of the cases. The procedure can be done by the cardiac surgeon and also allows closure of the sternum, which is successful in about 80% of the cases.

We support the use of the VAC when the sternum redevelops after initial débridement and closure, or when the sternum needs to be removed because of devascularization. VAC is also helpful when the subcutaneous tissue does not heal after initial débridement, omental flap, and closure.

Giorgio M. Aru, MD

Kenneth D. Call, MD

University of Mississippi Medical Center

Jackson, MS 39216

Reference

1. Luckraz H, Murphy F, Bryant S, Charman SC, Ritchie AJ. Vacuum-assisted closure as a treatment modality for infections after cardiac surgery. *J Thorac Cardiovasc Surg.* 2003;125:301-5.

doi:10.1016/j.jtcvs.2003.07.039

Reply to the Editor:

We note the comments of Aru and Call. Our article¹ described our initial experience with vacuum-assisted closure (VAC) for treating sternal wound infection. It was a purely descriptive rather than comparative process, and hence the results should be interpreted likewise. The number of patients described was relatively small (27 patients), and sweeping conclusions may be misleading. However, in the population group that we described, VAC represented an acceptable treatment option relative to